

ACKNOWLEDGEMENTS

Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to thank Allah Almighty for giving me the strength and ability to complete my dissertation project successfully. I would like to extend my deepest appreciation to my supervisor Dr. Ab. Halim bin Abu Bakar, for all his precious comments, guidance, ideas, advice, and also encouragement throughout development of this dissertation. Without his guidance, I might not have been able to finish the dissertation.

I would also like to express my appreciation to UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM) for sponsoring my Master's degree at UNIVERSITY OF MALAYA (UM) Faculty of Engineering.

Not to forget my family, especially my dearest husband, Khalid Ahmad Bin Naina Mohamed; my beloved parents, Hj. Saharuddin Bin Abdullah and Hjh. Useemah Bt Samsudin; my little daughter; my siblings and relatives; to them I extend my obligation and gratitude, for their continuous support, patience, prayers, and benevolence during the period of my study.

Special thanks to my friend Noor Shahida Jamoshid, a lecturer at the Faculty of Engineering of UniMAP Perlis, for her guidance in developing the modeling circuit used in this dissertation.

Lastly but not the least, I thank also all my friends at UM, and everyone who contributed towards completion of this dissertation. Your kindness, support, opinion, and advice are much appreciated. Thank you all very much!